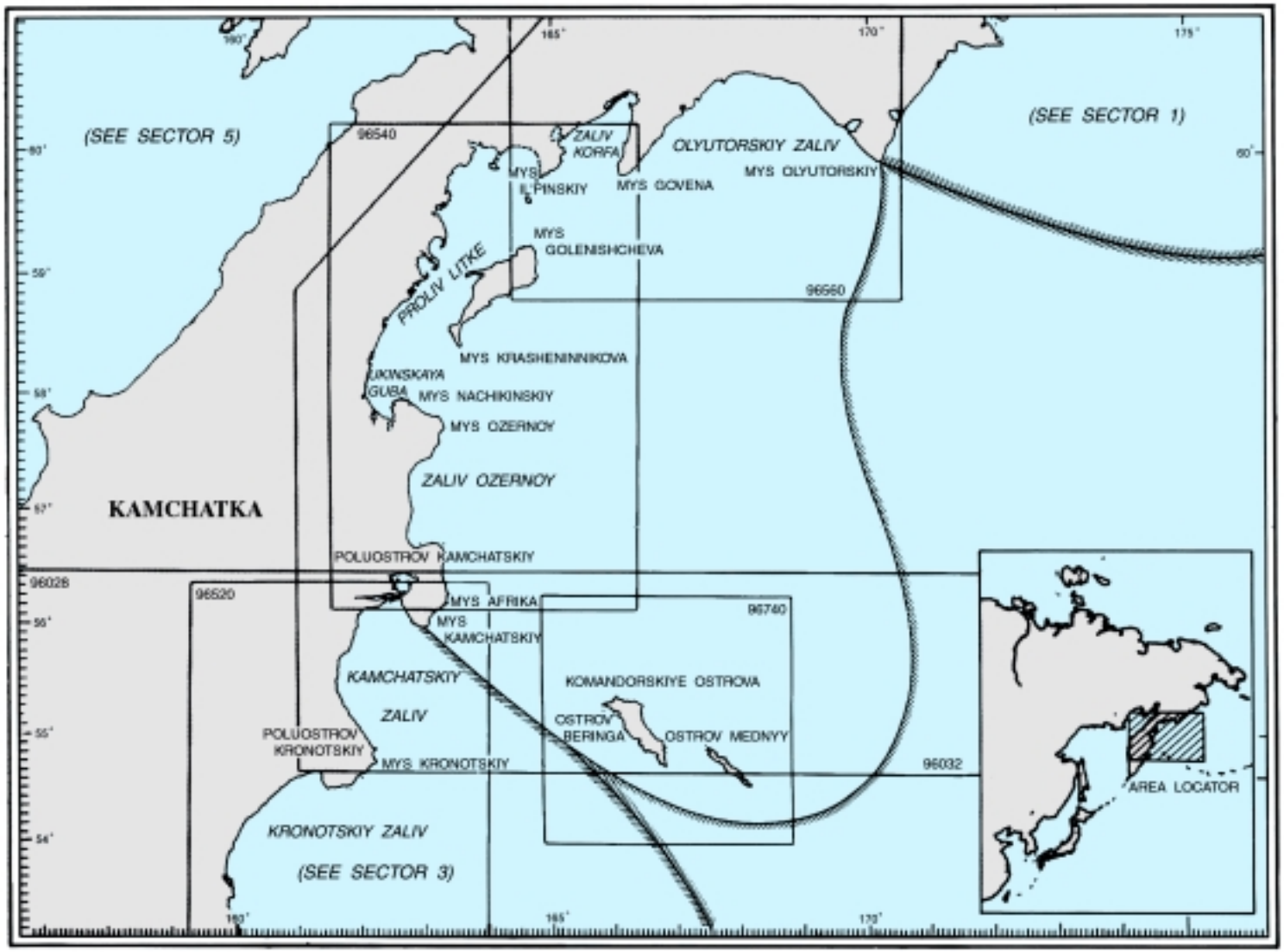

Additional chart coverage may be found in CATP2, Catalog of Nautical Charts.

SECTOR **2** — CHART INFORMATION

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SECTOR 2

OLYUTORSKIY ZALIV AND E COAST OF KAMCHATKA—MYS OLYUTORSKIY TO POLUOSTROV KAMCHATSKIY

Plan.—The coast described in this sector comprises the W shore of the Bering Sea, Komandorskiye Ostrova, and the E coast of Kamchatka from Mys Olyutorskiy to Poluostrov Kamchatskiy. The arrangement of the sector is from NE to SW.

General Remarks

2.1 Winds—Weather.—In the summer, the predominant winds are from a S direction and in winter, from a N direction. Wind speeds are greatest in winter, when gales are frequent. Fog occurs during the summer and is said to be most frequent in June.

The prevailing winds in Komandorskiye Ostrova from May to September are from the SE, S, and SW, and are usually accompanied by fog and rain. During this season, winds from the W through N to NNE bring clear weather, but winds from the NE and E bring cloudy weather and haze. In the remaining months, W and NW winds prevail. Typhoons may be encountered during the fall, as their path crosses these islands. Calms are rare and of short duration, and are most likely to occur in the early summer than in fall when any wind is stronger and of longer duration.

The climate of these islands is not severe, the temperature averaging 5˚C during the summer, and -2˚C during the winter. In the winter, during winds from the NE, heavy snow storms occur frequently. The snow remains on the islands, especially in the narrow mountain clefts, until about the end of July or the beginning of August. The late disappearance of the snow is due to its great mass and to the fogs, which are numerous and thick during the summer.

Ice.—No significant amount of ice is formed in Zaliv Ozernoy. Drift ice from the N usually appears in February and March and finally disappears with the effects of offshore winds and the sea.

Slush ice appears in Ukinskaya Guba during the latter part of November. During December and January, one solid mass of fast ice extends as far as 20 to 25 miles offshore. The earliest recorded first appearance of ice was November 14, the latest January 8. The earliest final disappearance was March 15, and the latest was June 22.

Slush ice in Proliv Litke ordinarily appears in early November. From December to mid-June the passage is solidly packed with heavy hummocky floating ice. In an extremely severe winter fast ice covers the entire passage through February and March. The passage is clear of ice by early July or sooner.

Ice begins to form in Zaliv Korfa in mid-December, but can form as early as late November during severe weather. There is drift ice in the bay until April, though it is sometimes carried out of the bay by the wind. The bay is clear of ice at the beginning of May, but in severe weather the bay may not be clear of ice until early June.

The rivers and lagoons of Olyutorskiy Zaliv begin to freeze in the latter half of October. Early in November slush ice appears in the bays and fast ice fringes the shore. Beginning late in December the bay gradually begins to fill with drift ice coming from the N along the W shore of the Bering Sea. The ice first appears as small floes, mainly in the W part of the bay. From March, when N winds are not so strong and often change to S breezes, the ice becomes much more tightly packed, although between Mys Olyutorskiy and Mys Kreshchenyy Ognem it generally leaves a shore lead from 1 to 3 miles in width. Strong S winds will drive the ice onshore, but as soon as these winds cease, the ice again recedes from the shore. In the NW part of the bay, from Mys Kreshchenyy Ognem to Bukhta Yuzhnaya Glubokaya, the ice is much more tightly packed, and onshore winds usually force it into hummocks. The E part of the bay becomes clear of ice much earlier than the W part, where it usually remains until the middle of June.

The sea around Komandorskiye Ostrova is free from ice during the entire year, but drift ice is brought to the islands from the E shore of Kamchatka during the prevailing W and NW winds.

Tides—Currents.—Between Mys Afrika, Mys Kamchatskiy, and Mys Kronotskiy the flow of the constant Kamchatka current is 40 to 50 miles wide, and in a general SSW direction, with a velocity of 0.6 knot. East of the Kamchatka current, approximately between 56˚N and 57˚N, and E from 165˚E to 169˚E, there is a constant current that flows in a general S direction and has a velocity of about 0.4 knot.

The currents in the S part of Proliv Litke set WNW and ESE on the flood and ebb tides, respectively, attaining a velocity not exceeding 1.5 knots. They are stronger near Mys Krasheninnikova.

In Guba Lozhnykh Vestey, the tidal currents are hardly perceptible, but outside the bay they set N and S, attaining their greatest velocity in the vicinity of Mys Semenova.

Off Mys Ploskiy the flood current sets SW at a velocity of 1 to 1.5 knots and the ebb current sets NE at the same velocity.

The currents in the vicinity of Komandorskiye Ostrova have not been fully investigated. According to reports, a constant current sets NE between Ostrov Beringa and Ostrov Mednyy. A weak current was observed setting N along the W side of Ostrov Beringa.

The tidal currents in the vicinity of Komandorskiye Ostrova are very weak, the flood current setting W and the ebb current setting E.

Olyutorskiy Zaliv

2.2 Olyutorskiy Zaliv, entered W of **Mys Olyutorskiy** (59˚55'N., 170˚21'E.), has not been thoroughly surveyed. The S half of the E side of the bay is high and steep, but the N half is low. The N side of the bay is generally low, except near Mys

Krasnyy and Mys Kreshchenyy Ognem, where mountains approach the shore. The W side of the bay is steep and mountainous.

2.3 East and N sides of Olyutorskiy Zaliv.—From Mys Olyutorskiy to a low beach at the mouth of a small stream, about 3 miles NW, the coast consists of gray cliffs gradually decreasing in height. From this stream to the S entrance point of Zaliv Anana, about 3 miles W, the coast consists of yellowish-gray cliffs, increasing in height. A light, from which a radiobeacon transmits, stands 4 miles NW of Mys Olyutorskiy.

Zaliv Anana has not been thoroughly surveyed. The SE entrance point slopes gently to the sea, the cliffs being steeper on its N side. The upper part of it is covered with vegetation, and a grayish hill rises on it. Mys Anana, the NW entrance point, is bluff and rises to a mountain, 768m high, with the sheer cliffs up to its summit being dark gray and veined with red, brown, black, and yellow stripes. A drying reef extends 0.3 mile WSW from Mys Anana. About 1 mile N of the S entrance point is a small projection faced by gray-green cliffs, off which is a cluster of drying rocks. Northward of this projection the coast becomes higher, and the slopes of a mountain, 629m high, located about 2 miles NE of this projection, form high dark-gray cliffs. For a distance of about 4 miles ESE from Mys Anana the shore is cliffy, except for a narrow valley located midway along it.

From Mys Anana the coast trends 3.5 miles NNW to the mouth of a river, the mountains approaching the coast for the first 2.5 miles. A ledge of rocks, about 1.5 miles NNW of Mys Anana, is marked by breakers. From the mouth of the river to Mys Seryy, about 3.5 miles NNW, the coast consists of gray and yellow cliffs gradually increasing in height, and the mountains gradually approaching the coast. Near the shore is a line of low hills.

2.4 Mys Seryy (60˚09'N., 169˚55'E.) rises to a mountain and is a high, bare-topped bluff faced by cliffs that are light gray and have a yellow tinge. A mountain, with gray cliffs and a conical summit, 747m high, is located S of the point and is separated from the point by a deep gorge in which there is a waterfall.

Zaliv Lagunnyy, a bight N of Mys Seryy, has not been examined, but depths of 12 to 16m, sand, are reported to be 1 to 2 miles offshore. Local fishermen report that the depths abreast the cannery increase regularly from 8.2m, about 0.2 mile offshore, to 10.1m, about 0.5 mile offshore, and to 14.2m, about 1 mile offshore.

From Mys Seryy to the mouth of Reka Kavacha, a river about 3 miles N, the shore is cliffy for the first 1.5 miles, then the hills recede inland and the shore becomes low. Reka Kavacha flows into Zaliv Lagunnyy through a lagoon, which is separated from the bight by the two narrow spits of land parallel to the coast. The tide is prevalent in the lagoon, and the ebb tidal current attains a velocity of 6 to 6.5 knots.

Mys Lagunnyy, the NW entrance point of Zaliv Lagunnyy, is a flat-topped rounded cape with steep gray cliffs, 61m high, and is covered with grass and moss. Vessels should give the cape a berth of at least 1 mile. The shore consists of cliffs for a distance of 1 mile E of the cape, but then the hills recede inland and the shore is rocky.

From Mys Lagunnyy to Reka Anichklanvayam, the coast rises in dark cliffs, with lighter patches, from 80 to 100m high. Close N of this river is a flat-topped bluff point. For about 3 miles N from this point the coast consists of gray cliffs, 20 to 30m high, but then for about 6.5 miles N to the mouth of Reka Apuka, the coast is low and sandy. In this vicinity the mountains are about 4 to 4.5 miles inland, are rounded, and slope gently.

2.5 Reka Apuka (60˚27'N., 169˚35'E.) flows into the sea through a lagoon which is separated from the sea by a sand and shingle spit. The valley through which Reka Apuka flows trends NE and is open, forming a good mark for this locality. Apuka is a village situated on the high ground on the W side of the entrance, and in this vicinity are a radio station, weather station, and an electric power plant.

Anchorage.—Anchorage can be taken in depths of 9 to 10m, sand, from 1 to 1.2 miles off the entrance to Reka Apuka. The holding ground is good.

Shoal water extends offshore, and the depths shoal rapidly inside the 10m curve, between the fishing station and the fish cannery, situated 1.5 and 2.5 miles SE, respectively, of the entrance. Anchorage can be obtained here in depths of 9 to 10m, sand, from 1.5 to 2 miles offshore.

Mys Krasnyy, about 2 miles W of the entrance to Reka Apuka, is a point formed by the slopes of a flat-topped hill. It is faced with low cliffs, those on the S side being yellow and light gray, with some dark patches about 0.1 mile E of the point, and those on the W side being gray with yellow patches, one of which appears as a wide horizontal band.

The coast for about 4 miles NW from Mys Krasnyy is cliffy and forms two bights. A valley with a stream is at the head of each bight. The point separating the bights is formed of black cliffs.

Reka Pakhacha forms two lagoons connected by a narrow channel and separated from the sea by low sand and shingle spits. The river empties into the sea from the E lagoon. The whole delta is fronted by a bar with a least depth of 2.1m. The village of Pakhacha is situated on the W spit and there are fishing stations on the cay and E spit.

Anchorage.—Vessels can anchor SW of the W river mouth in depths of 10m, exercising caution, as the depths shoal very rapidly. Vessels can also anchor in depths of 9.1m, sand, about 0.8 mile offshore abreast the fishing station (60˚34'N., 169˚04'E.).

The coast, from the mouth of Reka Pakhacha to about 3 miles ENE of Mys Kreshchenyy Ognem, is sandy and steep-to, and has depths of 11m, sand, about 1 mile offshore. The coast to Mys Kreshchenyy Ognem is high, bold, and rises close inland to mountains, the cliffs of which are marked by red, yellow, and dark colored patches.

2.6 Mys Kreshchenyy Ognem (60˚33'N., 168˚42'E.) is faced with red cliffs, about 20m high. The S end of the peninsula is high and is marked by irregular red and yellow crags. From the E or W, the peninsula appears as an island, because it is joined to the mainland by low swampy land, on

which are some ponds. Reefs marked by breakers during the slightest swell lie close off the point, and a rock was reported in 1933 to lie about 1 mile S of the point. A beacon, 4.9m high, stands on the S cliff of Mys Kreshchenyy Ognem.

The coast from Mys Kreshchenyy Ognem to Mys Zheltyy, about 2.5 miles WNW, is high and bold, consisting of black and red cliffs. The steep cliffs on the S side of Mys Zheltyy are a subdued yellow with large red patches. The W side of Mys Zheltyy, as far as its extremity is of a bright yellow color, making the point very conspicuous from the W.

A sloping dark green mountain, about 366m high, rises at the head of the bight between Mys Zheltyy and Mys Groznyy, about 2.3 miles NW. On either side of the mountain is a valley with a stream. A fishing station is situated on the low beach near the mouth of the W stream. Off this fishing station the depths are irregular, there being depths of 10m about 1.2 miles offshore, and depths of 11m about 0.4 mile offshore.

Mys Groznyy, rising to a mountain 463m high, is a dark rugged cape faced by sheer cliffs, the extremity of the cliff being light gray. A black pyramidal rock, conspicuous from the W or E, lies close to the cape. From the S the cape appears as a steep dark-gray wall, but from the SW the cliffs are black, and the formation of the strata is clearly seen.

The coast from close N of Mys Groznyy to about 4 miles W is low.

Anchorage.—Anchorage can be obtained in a depth of 9.1m, sand, about 1 mile off a fishing station situated midway along this coast.

From Reka Impuka Yuzhnaya to a fishing station about 9 miles W, the coast consists of low grass-covered terraces with yellow-gray cliffs about 20m high, broken by deep gullies and streams. Anchorage can be taken in a depth of 9m, sand, about 1 mile off this fishing station, which is situated on a low sandy beach extending to the mouth of Reka Yemet.

The coast from Reka Yemet to Bukhta Somneniya, about 7 miles SW, is formed by 30 to 40m cliffs rising to some hills covered with grass and bush. About 2.5 miles SW of Reka Yemet is a conspicuous valley, through which runs a stream. The shore is steep in this vicinity and the cliffs are gray with yellow stripes.

2.7 Northwest and W sides of Olyutorskiy Zaliv.—Bukhta Somneniya (60˚31'N., 167˚47'E.), an inlet surrounded by mountains, has high and steep E and W shores, but the head of the inlet is low and sandy. A rocky ledge extends about 0.4 mile E from the SW entrance point, and a patch of drying rocks extends a short distance off the NE entrance point. A detached reef, which partly dries and on which are two above-water rocks, extends about 0.4 mile ENE from a position 1.2 miles E of the SW entrance point. The sea constantly breaks on this danger. The vicinity of this danger and the passage between it and the NE entrance point have not been examined.

About 1 mile off the entrance to Bukhta Somneniya are depths of 12.8m, which decrease gradually in the fairway to the head of the inlet. Depths in the outer portion range from 5.8 to 9.1m. Both shores of the inlet are fringed with rocks, and a 3.3m patch lies about 0.4 mile off the E shore 1.3 miles NNE of the SW entrance point. The bottom of the inlet consists of sand and pebbles.

Anchorage.—In summer small vessels can anchor in the inlet sheltered from all but SE winds. The strong N squalls that occur in the autumn render the anchorage difficult.

A vessel entering the inlet should steer midway between the SW entrance point and the detached reef in the entrance.

The coast between Bukhta Somneniya and Bukhta Lavrova, about 20 miles WSW, is high and steep, and indented in four places. There are depths of at least 20m about 2 miles off this steep-to coast, the bottom being rock, sand, and shells.

The next indentation, about 10 miles WSW of Bukhta Somneniya, has a NE entrance point consisting of a steep cliff with a large waterfall, N of which is a sharp peaked mountain with an yellow-red cliff reaching almost to its summit. Abreast the fishing station there are depths of 11.9m and 15.9m, about 0.5 and 0.8 mile, respectively, offshore.

The third indentation, close WNW of the second, has not been surveyed. The entrance points, as well as the E and W shores, are bold and high. At the head of the bight is a low, sandy spit separating the bight from a lagoon. This lagoon is reported to extend about 7 miles in a NW direction, and to have depths of 2.4 to 3.4m in its entrance, 20.1 to 29m in its middle part, and 5.9 to 8.2m near its shores.

2.8 Bukhta Lavrova (60˚19'N., 167˚08'E.) is surrounded by mountains about 1,000m high, and narrows to about 0.4 mile at its head, where it divides into two arms. Bukhta Vestovaya, the W arm, extends about 1.5 miles W, and Bukhta Ostovaya, the E arm, extends about the same distance E.

The SW entrance point is a low sand and shingle point extending SE from a small terrace about 30m high. On this terrace is a white pyramidal slatted beacon, about 4.3m high. A radiobeacon transmits from this entrance point. A dark colored mountain, about 610m high rises near the point. A reef, on which are some rocks above-water, fringes the point and extends as far as 0.2 mile S and SE from it. On the W side of the inlet are three mountains, separated by narrow valleys through each of which flows a stream. Except at the mouths of these streams, the shore consists of high cliffs fringed by sunken and drying rocks.

View of third bight lying WNW of Bukhta Somneniya

The NE entrance point is formed by the high bluff slope of the mountain forming the SE end of the range running along the E side of the inlet. A rocky shoal, partly above water and marked by breakers, is located about 1.4 miles W of the NE entrance point. Off the shoal are depths of 11 to 15m. The passage between this danger and the point has not been examined. About halfway along the E side of the inlet is a mountain with a conical peak, about 1,006m high. Several waterfalls run over the cliffs on the E side, and it is fringed by sunken and above-water rocks.

Between the entrance points of Bukhta Lavrova there are depths of 11.9 to 14.9m, gradually decreasing to depths of 4m on a bar, about 1 mile from the head. The depths increase again N of this bar to as much as 31m in a pool between the spits at its head. The bottom is rock and shingle near the shore and sand toward the middle of the inlet.

Bukhta Vestovaya, the W arm, is entered N of a low, sandy spit extending about 0.3 mile in a N direction. The arm is about 0.1 mile wide in the entrance, and widens inside to about 0.2 to 0.3 mile. On each side of this arm are high mountains. Streams and waterfalls flow down the cliffs. During the autumn, when strong NW winds occur, strong squalls sometimes come down this arm. Bukhta Vestovaya is usually free of ice by the end of June.

In the middle of the entrance to Bukhta Vestovaya are depths of 12.8m, but near the S entrance point are depths of 8.5m. For about 0.5 mile inside the entrance the depths increase to 16.5 to 20m, and then decrease to 16 to 10m to a drying shoal extending 0.1 mile from the shore at the head of the arm. The bottom is soft mud.

Bukhta Ostovaya, the E arm, is also entered N of a low sand and shingle spit extending about 0.5 mile NW. For the first 0.5 mile this arm is 0.15 mile in width, but then it widens to about 0.3 mile. Both sides of the arm are mountainous.

The narrow part of the entrance to the arm has depths of 23m in its W part, gradually decreasing to 10m near the E end of the arm. In the middle of the arm there are depths of 12 to 14m. A drying shoal extends about 90m from both sides of the arm, and 0.15 mile from the head.

Tides—Currents.—The tides at Bukhta Lavrova are mixed, principally diurnal. When the moon is near the equator they are semidiurnal, and when the moon is at its greatest declination they are diurnal. The diurnal range is about 1.1m.

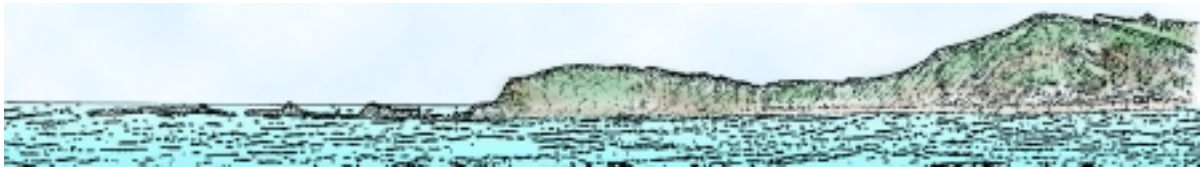
Anchorage.—Good anchorage, sheltered from all winds, can be obtained by small vessels at the head of Bukhta Lavrova. Swells from the S or SE are negligible at the anchorage.

Directions.—A vessel entering the inlet should steer for the SW entrance point and pass it at a distance of not less than 0.4 mile.

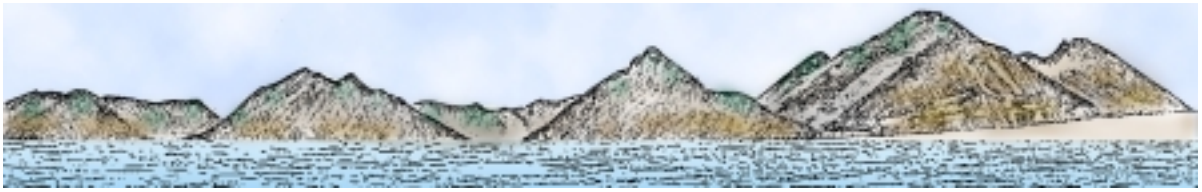
A small cove indents the coast about 4.5 miles SW of Bukhta Lavrova. Reka Nauynem flows into the SW corner of this cove. The buildings of a fishing station near the mouth of the river are visible from a considerable distance. The S entrance point of the river is formed by high cliffs with a small projecting point from which a ledge, on which are sunken and above-water rocks, extends about 0.4 mile NE. The N entrance point of the river is low and sandy.

Vessels with local knowledge can anchor near the coast N of the end of the rocky ledge.

2.9 Bukhta Yuzhnaya Glubokaya (60˚12'N., 166˚54'E.), lying about 10 miles SW of the entrance to Bukhta Lavrova, extends about 2.7 miles in a general W direction and is about 0.5 mile wide in its outer part. About 0.7 mile inside the entrance the inlet is narrowed to about 0.3 mile by a spit extending from either shore. About 0.4 mile W of the S spit is a small promontory, and on the W side of this promontory is a low sand spit. At this promontory is a fishing station with a small wharf reported to have depths of 3.7 to 4.6m alongside. The inlet turns in a WNW direction abreast this promontory and narrows to its head. The mountains surrounding the inlet are steep and terminate at the shore in high cliffs. A few streams empty into the inlet, and at the head a wide valley trends W.



Coast in the vicinity of the mouth of Reka Nauynem from NE



Coast between Bukhta Lavrova and Bukhta Yuzhnaya Glubokaya

There are depths of more than 20.1m about 1.5 miles off the entrance, decreasing to a bar with depths of 7.3 to 10.4m at the entrance. A narrow bank, with a depth of 4.6m, extends 0.4 mile SW from the N entrance point, and a wedge-shaped bank, with a least depth of 4.6m, extends 0.4 mile NW from the S entrance point. The depths increase rapidly to 29 to 40m W of the bar, then to 50m between the spits extending from either shore, and then to 66m abreast the fishing station. Beyond the fishing station the depths gradually decrease to 29m about 0.4 mile from the head of the inlet, and then suddenly to 7.6m and less. When entering, it is advisable to keep to the S shore, as some submerged rocks lie about 0.3 mile offshore, about 1 mile inside the entrance.

The entrance to the inlet is hard to distinguish. The fishery administration maintains a small white pyramidal beacon on each entrance point, but these are only visible from a short distance. A radiobeacon transmits from the S point. In the vicinity of the inlet the valleys extend down to the shore and the mountains appear as small ranges trending in an E-W direction. This feature serves as a guide to a vessel going to this inlet.

Tides—Currents.—The tides are of mixed type, principally diurnal. When the moon is near the equator they are semidiurnal, with a maximum range of 0.6 to 0.9m, and when the moon is at its greatest declination, they are diurnal, with a maximum range of 1.4m.

Anchorage.—Bukhta Yuzhnaya Glubokaya affords shelter from all but E winds, which send in a sea even to its head, causing a heavy surf and making it dangerous for a vessel to remain at the wharf. There is reported to be good anchorage at the head of the inlet over a bottom of mud and sand. Due to the deep water elsewhere, several anchors have been lost by vessels attempting to anchor.

Small vessels can anchor about 0.1 mile off either shore, E of the two spits located 0.7 mile inside the entrance.

The coast from Bukhta Yuzhnaya Glubokaya to the W entrance point of **Olyutorskiy Zaliv** (59˚49'N., 166˚15'E.), about 30 miles to the SW, is steep-to, but pillar rocks and drying rocks lie close to the shore. A 1.6m patch, position doubtful, is located 19 miles NE of the W entrance point, about 2.5 miles offshore.

The W entrance point of Olyutorskiy Zaliv consists of the projecting cliffs of a hill, 296m high. A natural arch in the vicinity of the point is very conspicuous when seen from the S at a distance of 2 miles. North of the hill a waterfall runs over the cliffs.

The coast from the W entrance point to Mys Govena, 6 miles W, consists of a line of detached hills with conical jagged peaks, 275 to 365m high, rising from the coast in dark cliffs showing light gray patches. The slopes and valleys are covered with vegetation. Several detached pillar rocks and reefs lie close offshore, but the coast is steep-to, with depths of 14 to 16m about 1 mile offshore.

Zaliv Korfa

2.10 Zaliv Korfa (Korfa Gulf), entered W of Mys Govena, has depths of 79m in the middle of the entrance, decreasing gradually to 29m about 10 miles from the head. A detached 11m patch is located in the middle of the gulf, about 18 miles from its head. At the head of Zaliv Korfa are three harbors formed by spits extending from the mainland. Gavan' Skobeleva, the harbor on the E side of the head, affords shelter to vessels drawing up to 9.1m.

2.11 East side of Zaliv Korfa.—Mys Govena (59˚48'N., 166˚05'E.), the E entrance point, is a moderately high, steep, gray cliffy headland. A row of pillar rocks lies SW of the cape, the largest and farthest offshore being shaped like a shoe. Gora Yuzhnaya, 402m high, rises close to the cape and on its summit are sharp pointed crags.

A light is shown on Mys Govena from a white pyramidal stone tower with black bands.

Mys Govena Light

From Mys Govena to Mys Primetnyy, about 5 miles N, the cliffs become higher and the coastal mountains gradually approach the coast in easy slopes. Mys Primetnyy is a small rugged headland projecting about 0.5 mile from the general line of the coast, and is formed by a shoulder of Gora Primetnaya.

Gora Primetnaya, a conspicuous conical mountain rising about 1 mile NE of Mys Primetnyy, has a pointed summit, 418m high, inclined W. The cliffs on its seaward side are brown, with dark and light gray stripes. When seen from the S or N, the mountains appear black and detached, and when seen from the W, the summit appears rounded and has two hummocks. The cliffs N of Mys Primetnyy decrease in height, and small rounded hills are located close to the coast.

2.12 Mys Peschanyy (60˚08'N., 166˚11'E.), about 16 miles NNE of Mys Primetnyy, is low, sandy, rounded, and steep-to. A small hill, about 2 miles S of Mys Peschanyy, forms a gray bluff about 67m high. South of this hill is the mouth of a small river.

A fishery is situated at the mouth of a small stream, about 3 miles NE of Mys Peschanyy. The coast here is low and flat. Anchorage can be obtained in 10m, about 1 mile off the fishery.

Two bights indent the coast between 5 and 10 miles N of the above-mentioned fishery. In this vicinity the mountains recede inland, and between them and the coast are tundra and small rounded hills. A fishery is situated at the mouth of Reka Yaon Vayam, at the head of the N bight. A group of dangerous rocks is located 1.5 miles WNW of the river mouth. They are reported to be marked in the summer by privately maintained buoys.

Kamni Drakhenfel'sa (60˚22'N., 166˚12'E.), consisting of two rocks about 6.1m high and several other drying rocks, are marked by breakers during any swell. Breakers have been seen between Kamni Drakhenfel'sa and the spit to the E.

2.13 Head of Zaliv Korfa.—The head of Zaliv Korfa consists of three harbors, each formed by a spit extending from the shore. From the E to W these harbors are Gavan' Skobeleva, suitable for vessels drawing up to 9.1m, Gavan' Sibir', suitable for vessels drawing up to 5.5m, and Gavan' Skrytaya, which is shallow.

Aspect.—The head of Zaliv Korfa is surrounded by mountains, of which the following are the most prominent.

Gora Kekurnaya (60˚22'N., 166˚42'E.), 1,277m high, dominates the surrounding mountains, and has a black conical summit, from which rises a great finger-shaped crag. Gora Severnaya, 1,242m high, about 5 miles farther N, is pyramidal in shape and has a pointed gray summit.

Gora Mnogoglavaya (60˚32'N., 166˚18'E.), 603m high, has numerous peaks surrounding a sharp conical peak. Its slopes are covered with scrub, but its summit is bare and light gray. Gora Usechennaya, about 6.5 miles WSW, has three bare summits lying in a NE-SW direction, the highest of which is 516m high.

Gora Prodolgovataya, 458m high, about 1.5 miles SW of Gora Usechennaya and from which it is separated by a deep ravine, has a flat summit sloping gradually from the N to S. It is covered with vegetation, but near its summit are some light gray patches.

Gavan' Skobeleva is bordered W by a low sandy spit extending about 2.2 miles N from the mainland. A few huts are situated on the N end of the spit.

Olyutorka, a village, lies on the S shore of Gavan Skobeleva, W of the mouth of Reka Alutovayam. Banka Zhukovskogo, a shoal with a least depth of 0.8m near its extremity, extends a little over 1 mile NW from the N end of the spit. This shoal is steep-to on its W, N, and E sides, the depths shoaling abruptly from 10m.

An area with a least depth of 9m extends about 2.5 miles W, 2 miles N, and 1 mile E from the N end of Banka Zhukovskogo. The depths SE of this area gradually decrease to 5.2m about 0.5 mile offshore.

Ice.—The harbor freezes over toward the end of October, and is finally clear by about the middle of June. Because of fresh water coming into Gavan' Skobeleva from Reka Kultushnaya, ice forms earlier in this harbor than in Gavan' Sibir'. The prevailing N winds in autumn tend to pack the ice into the harbor.

Anchorage.—Vessels drawing up to 9.1m can find shelter in the harbor, the bottom consisting of mud and sand, good holding ground. No swell enters the harbor, but strong N and NE winds raise a considerable sea.

2.14 Gavan' Sibir' (60˚28'N., 166˚15'E.) is formed between the mainland and Kosa Konokhval, a grassy spit extending about 2.8 miles ENE from the coast. This spit is narrow except in its middle part, where it widens to about 0.3 mile. The mainland shore of the harbor is steep and precipitous. A mud bank, about 0.2 mile wide and covered with grass, extends 1.5 miles NE from the middle of the spit and divides the harbor into two parts. The part N of the mud bank is shallow, and the part S of the mud bank is the harbor proper. Southerly winds are felt most in Gavan' Sibir', but these rarely attain any force.

The extremity of Kosa Konokhval is steep-to, with depths of 6.4m about 45m off it. An area 0.6 mile long and 0.1 mile wide, with depths of 6.4 to 7m, lies NW of the extremity. Farther W, as far as the first buildings of the fishing station, there are depths of 3 to 4.9m near the spit. A light is shown about 2 miles W of the fishing station.

Ice.—The harbor freezes at the end of October and is finally clear of ice by about the middle of June.

Tides—Currents.—The tides are principally diurnal, but they are semi-diurnal with the moon near the equator. During the diurnal tides the flood current runs longer than the ebb, and the period of SW is longer at HW than at LW.

Anchorage.—Vessels drawing up to 5.5m can anchor in depths of 6.4m, about 0.1 mile N of the extremity of the spit. The bottom is sand and mud, good holding ground. Anchorage can also be obtained about 0.4 mile off the S side of the spit, abreast the fishing station, where there are depths of about 7.3m.

Gavan' Skrytaya, on the W side of the head of Zaliv Korfa, is nothing more than a shallow lagoon, separated from the sea by a narrow sand spit covered with grass. A shoal, which uncovers at LW and on which the sea breaks at HW, extends 0.8 mile E from the extremity of the spit.

Zeleny Kholm, a conspicuous hill with a rounded summit, 58m high, is located on the mainland, about 0.5 mile ENE of the entrance, and forms a good landmark. In the spring this hill is bright yellow and in the summer it is dark green. From mid-May to mid-December, Skrytyy Light is exhibited from a stone tower, painted in black and white bands, situated on the summit of Zeleny Kholm.

Skrytyy Light

The village of Korf is situated near the root of the sand and shingle spit separating Gavan' Skrytaya from the sea.

Portovyy Punkt Korf comprises the waters within a radius of 5 miles of the village. The port is open to foreign vessels.

Pilotage.—Pilots are not available. Vessels bound for Korf are required to contact the port before arrival and maintain a 24-hour watch on channel 16 when at anchor. Korf maintains a 24-hour radio watch on 2182 kHz, 300 kHz, and VHF channel 16.

Anchorage.—Anchorage can be taken in a depth of 6m, sand, about 0.5 mile offshore abreast the village, or by deep-draft vessels in the outer roadstead as directed by the port authority.

Directions.—To approach Portovyy Punkt Korf steer for a position bearing 110˚, distant 12.8 miles from Mys Oria Light, keeping outside Russian territorial waters until reaching this point, then steer 027˚45' for 23.5 miles to the outer roadstead. Steer 000˚ to the anchorage. The width of the channel as far as the outer roadstead is 2 miles.

2.15 West side of Zaliv Korfa.—Ako Anchorage (60˚17'N., 165˚52'E.) is situated off Reka Ugol'naya, a river flowing SE through a valley. The buildings of Ako Coal Mine are situated in this valley and stand out against a yellow patch in the background. About 0.8 mile SW of the river is a conspicuous cliff, known as Gora Krasnaya , which is marked by a bright red patch. This cliff is conspicuous from the S. Northward of this red patch is another smaller patch. The coast for a distance of 4 miles NE from the coal mine consists of a low plateau that falls in terraces to the sea and is faced by gray sandy cliffs. The plateau is intersected by gullies, through each of which flows a stream.

Anchorage.—Anchorage can be obtained in depths of 9m, good holding ground, about 2 miles abreast the coal mine.

Gora Ugol'naya (60˚16'N., 165˚36'E.), an isolated mountain range, is prominent, and from the S appears as a cone. From the E its summit appears to be undulating and slightly lower towards it S end. Its slopes are precipitous.

The coast NE of **Reka Vyvenka** (60˚11'N., 165˚29'E.) is high and consists of cliffs and landslides. A large flat-topped pillar rock, about 61m high, lies close offshore, about 1.5 miles NE of the mouth of the river. About 2.5 miles farther NE, another high pillar rock lies close offshore and appears as a small point. A fishing station is situated behind the latter rock.

Winds—Weather.—During N winds that prevail in early spring and late autumn, heavy squalls, lasting about 5 minutes, are frequent.

Anchorage.—Anchorage can be obtained in depths of 11m, sand, with the rock which fronts the fishing station bearing 315˚. It is not advisable to anchor S of the rock, as local fishermen report a reef extending from it. At this anchorage the prevailing N winds in the winter drive the ice away from the shore, leaving an open lane, and at this time there is seldom any surf in this vicinity.

The S side of the mouth of Reka Vyvenka is formed by a narrow sand spit extending NE. The N side is formed by a similar spit, which extends from the high barren slopes of Gora Ugol'naya.

Anchorage can be obtained in depths of 9 to 10m, about 1 mile offshore abreast the mouth of the river.

The coast from Reka Vyvenka to Mys Priyatel', about 8 miles SW, consists of cliffs and landslides and is fringed by a sandy beach. Hills covered with grass extend about 10 miles inland to the mountains. **Gora Ploskaya** (60˚22'N., 165˚14'E.) is in the form of a truncated cone.

Mys Priyatel' is an inconspicuous point formed by a slight bend in the coast, the cliffs at the point being about 20m high. Between Mys Priyatel' and the entrance to Laguna Legunmun, about 3.5 miles SW, the breakers begin at a distance of 1 to 1.5 miles offshore. Laguna Legunmun is a shallow lagoon, the shores of which are mainly low.

2.16 Mys Ara (60˚01'N., 165˚12'E.), a narrow bold promontory, about 20m high, is flat-topped and has a very rough surface. Near it is a group of gray hills, on which is dark green vegetation. A pillar rock lies off the promontory and is separated from its extremity by a ravine. Two large above-water rocks lie near this pillar rock. A reef, steep-to at its seaward end, extends 0.4 mile NE from the point.

Bukhta Geka, between Mys Ara and Mys Priyatel', is bordered S by hills close inland sloping down to the cliffy shore. About 1.5 miles W of Mys Ara the coast becomes low and the hills recede inland. For about 4 miles to the entrance to Laguna Legunmun this low coast is covered with grass and the shore consists of a flat sandy beach.

Only the S part of Bukhta Geka has been examined. Between Mys Ara and the end of the cliffs about 1.5 miles W, the bottom is irregular with depths of 10 to 12m about 1 mile offshore, decreasing rapidly inshore. A reef covered with kelp extends as far as 0.3 mile offshore. About 1 mile offshore from the end of the cliffs to the mouth of Laguna Legunmun are depths of 8.2 to 10m, sand, but a considerable area off this shore dries at LW and at a distance of 0.1 to 0.2 mile offshore are depths of only 0.3m.

Anchorage.—Anchorage can be obtained during good weather in depths of 9 to 10m, with Mys Ara bearing 146˚, distant 1.5 miles. Care must be taken to avoid the 0.9m patch about 1.2 miles NNW of Mys Ara. Vessels should not anchor closer to the shore, as the depths decrease very rapidly. During fresh winds or an onshore swell, vessels should anchor farther offshore in greater depths.

Bukhta Geka is frozen from November to May.

2.17 Mys Oria (59˚59'N., 165˚14'E.), lying about 1.2 miles SE of Mys Ara, is bluff and projects in the form of a flat-topped wedge, faced with gray cliffs. At its extremity is a small green hill. Some pillar and sunken rocks lie close offshore in this vicinity. A light is exhibited on Mys Oria.

Mys Oria Light

The coast from Mys Oria to Mys Lozhno-Il'pinskiy is bold, with the mountains approaching the coast sloping to it in sheer, gray cliffs, 40 to 50m high. The mountains are fairly uniform and have peaked summits from about 305 to 503m high. They are covered with vegetation, and when seen from a distance

they appear dark with patches of green and gray. Streams flow through the valleys and many end in overfalls over the cliffs.

Mys Lozhno-Il'pinskiy, 9 miles SSW of Mys Oria, is a rounded, bold, flat-topped headland merging into the mountains about 0.5 mile inland. Westward of this headland are two large patches with stripes of contrasting color. A reef, which dries and on which the sea breaks heavily, extends 0.5 mile SE from the headland.

The coast from just N of Mys Lozhno-Il'pinskiy to Mys Il'pinskiy, about 8 miles further SW, consists of a level plateau extending as far as 2 miles inland and faced by sloping cliffs about 20 to 31m high.

Karaginskiy Zaliv

2.18 Karaginskiy Zaliv is the name given to that part of the Bering Sea W of a line joining Mys Govena, the E entrance point of Zaliv Korfa, and Mys Ozernoy, about 155 miles SW. Ostrov Karaginskiy, a large island in the middle of Karaginskiy Zaliv, is separated from the mainland by a passage known as Proliv Litke.

Ostrov Karaginskiy

2.19 East and S sides of Ostrov Karaginskiy.—The coast S of **Mys Golenishcheva** (59˚14'N., 164˚36'E.) is high and rocky. A fishing station is situated at the mouth of a stream about 3.5 miles S of the cape. The stream enters the sea through a sandy beach. The coast rises from the head of the bight toward Mys Gorbatyy, a point faced with brown cliffs about 152m high and rising to two round-topped mountains, which from S or N have the appearance of two humps of a camel. Steep-to rocky ledges extend 0.8 mile from Mys Gorbatyy.

A ledge, consisting of above-water rocks and drying rocks, extends off a point about 1 mile W of Mys Gorbatyy and forms a natural breakwater sheltering the fishing station.

About 1 mile from the head of the bight there are depths of 14.6 to 16.5m. Off the head the bottom is sand, changing to rock N and E. The coast in the vicinity of the head is steep-to and should be approached with caution.

Temporary anchorage can be obtained near the head of the bight. The best berth is in depths of 18 to 21.9m off of the fishing station, but nearer the W shore, where, there are reported to be no dangers.

2.20 The coast from Mys Gorbatyy to **Mys Nizkiy** (59˚02'N., 164˚44'E.), the E extremity of the island, consists of steep, brown or grayish-brown cliffs, broken here and there by a stream flowing through a narrow valley and having a sandy beach at its mouth. Rocks and reefs lie up to 0.8 mile off the coast. Mys Nizkiy is formed by moderately high gray cliffs, and about 0.8 mile N of it is a similar point.

From Mys Nizkiy to Mys Kekurnyy, about 8.5 miles S, mountain spurs, 152 to 213m high and covered with trees, approach the coast and form moderately high grayish-brown cliffs, interspersed in places by small extents of sandstone cliffs. In the vicinity of Mys Kekurnyy these spurs increase in height, attaining an elevation of 506m about 2.5 miles WSW of the cape.

Mys Kekurnyy (58˚54'N., 164˚42'E.), a brown headland, is conspicuous when seen in profile because of its height and its serrated slope. Several pillar rocks lie offshore in the vicinity of this cape.

From Mys Kekurnyy to Mys Rovnyy, about 4 miles SW, the coast consists of continuous steep cliffs except for a small sandy cove about 1 mile SW of the former point. Rocks and reefs fringe the coast about 1 mile off of which there are depths of 11 to 14.6m. Mys Rovnyy is formed by a gradual slope edged with low cliffs. A reef that dries at LW extends 0.2 mile S from the point.

2.21 The coast from Mys Rovnyy to **Mys Promezhutochnyy** (58˚48'N., 164˚11'E.) is formed by small rocky points separated by small sandy coves, into each of which flows a stream. Mountain spurs, 198 to 396m high, reach almost to the coast and form a line of moderately high, crumbling, brown cliffs. Rocks, reefs, and shoals, with depths of 11m or less, lie up to 1.7 miles from this part of the coast.

Ostrovok Ptichiy (58˚52'N., 164˚30'E.), separated from the coast by a passage about 0.1 mile wide, is flat-topped and covered with grass. A great number of birds nest on the islet. Around the islet are rocks and reefs that fill the passage between it and the coast. The islet is difficult to make out from the offing, as it is about the same height as the cliffs on the neighboring coast.

At **Mys Yuzhnyy** (58˚38'N., 163˚46'E.), a prominent mountain rises sheer from the point. This mountain is the S peak of the mountain range which rises from the coast in huge brown or light gray slopes and cliffs to elevations of over 731m. Between Mys Yuzhnyy and the isthmus, about 6 miles SW, the coastal hills do not exceed a height of 244m and the coast consists of low, brown sandstone cliffs. From the isthmus to Mys Krasheninnikova the coast consists of low sandstone cliffs, broken by low rocky points, and has a very uniform appearance.

Mys Krasheninnikova (58˚27'N., 163˚29'E.), the S extremity of Ostrov Karaginskiy, is formed by cliffs, which do not exceed 31m in height, and generally are of rock formation, but with some sandstone. A remarkable pillar rock of the same height as the cliffs is located immediately off the cape. A radiobeacon transmits on the coast, 6 miles N of Mys Krasheninnikova.

From the pillar rock off Mys Krasheninnikova a reef extends SSE for about 2.5 miles and is marked by breakers near its extremity. A continuous belt of kelp extends for 4 miles farther SSE and then continues in isolated patches in a S direction for about 6 miles. This vicinity has not been fully examined, but the kelp appears to grow on a sunken rocky ledge about 2 miles wide. A Russian vessel crossed the ledge 1.5 to 2 miles from the cape and found a least depth of 6.4m. The swell does not break on the ledge because of the kelp, and it is probable that many sunken dangers exist on it. It appears that the ledge does not extend beyond the limits of the kelp.

An isolated sunken rock, position doubtful, was reported (1913) to lie about 12 miles SE of Mys Krasheninnikova, and a sunken rock, position approximate, on which the sea breaks in any swell, was reported (1938) to lie about 19 miles ESE of the cape.

2.22 West and N sides of Ostrov Karaginskiy.—From Mys Golenishcheva to Mys Ploskiy, about 8 miles SW, the coast consists of brownish-yellow cliffs up to 61m high. (See Northern Entrance to Proliv Litke). Small streams flow through gullies into the sea. A flat tableland extends from the steep cliffs of Mys Ploskiy to the foothills of the main range.

About 3 miles SW of Mys Ploskiy, a small river flows through a wide valley. Close E of the river the coast rises and forms an unbroken wall about 45 to 61m high. The hills close to the coast are about 259m high and are part of the spurs of the main mountain range.

From the small river to the base of the spit forming the N side of Guba Lozhnykh Vestey, the coast consists of sandy cliffs, which are at first high, but gradually become lower, with an occasional cliff projecting seaward. The land inland of this coast rises gently to the main mountain range.

The low spit to **Mys Semenova** (58˚59'N., 163˚41'E.) is formed of sand dunes and is overgrown with grass. Mys Semenova and the N side of the spit for 2.5 miles NE are steep-to, with depths of 37m close to the shore.

Guba Lozhnykh Vestey is entered between Mys Semenova and a blunt point about 6 miles SSE, on which there are some buildings. Northward of the blunt point the coast rises in low, yellow, sandy cliffs, becoming covered with grass farther N and losing height toward the head of the bay, where there is a low sandy beach. The E half of the spit forming the N side of the bay contains a lagoon, which is connected to the head of the bay by a channel. The lagoon has depths of 3m in its E part, and its shores are flooded to a great extent at HW. Lozhnykh Vestey, a village, is situated close S of the lagoon entrance.

No detailed survey of the bay has been made, but it is believed to be clear of dangers. The bay has depths of 9 to 18.3m in its greater part. Toward the E side the depths shoal regularly, and at a distance of 0.8 mile offshore, they are 4.5 to 5.5m. On the N side of the bay the depths are also regular off the inner half of the spit, being 4.5 to 5.5m at a distance of 0.2 mile offshore. Off the outer half of the spit are comparatively greater depths, and the spit becomes more steep-to as the extremity is approached, with depths of 18.3 to 28m off that point. Caution is necessary in approaching the spit in thick weather, as it is steep-to and soundings give no indication of its proximity.

Tides—Currents.—At Guba Loznykh Vestey the MHW interval is 7 hours 30 minutes. The spring range is 1.8m, while the neap range is 0.9m.

Anchorage.—Anchorage can be obtained in Guba Lozhnykh Vestey in convenient depths. The bottom changes from sand to shingle and mud towards the head of the bay. The best berth is in 12.8 to 14.6m, sand and mud, good holding ground, close under the spit, about 2 miles WNW of Mys Semenova. This berth is sheltered from all but S winds, and although S winds may send in a considerable sea, the swell soon subsides as the wind drops. The lagoon at the head of the bay affords good anchorage for small craft with local knowledge.

2.23 The first 6 miles S of the SE entrance point of Guba Lozhnykh Vestey consists of grass-covered cliffs alternating with short stretches of sandy beach. For the next 14 miles SSW the cliffs are continuous and higher, from 45 to 61m high, bright yellow in color and intersected by numerous streams. A mountain, 305m high, conspicuous because of its isolated position and conical shape, is located about 1 mile inland and about 5.5 miles S of the SE entrance point of Guba Lozhnykh Vestey. Inland in this vicinity, clumps of birch alder and juniper cover the W slope of the central mountain range. The whole coast is clear of dangers with depths of 6.4 to 9.1m, sand, 0.5 mile offshore.

The NW part of the peninsula, forming the S part of Ostrov Karaginskiy, is low and sandy.

Anchorage.—Anchorage, sheltered from S winds, can be obtained in depths of 6 to 11m, sand, about 0.5 mile off the N side of the peninsula.

The W coast of the peninsula for the first 3 miles S is low and sandy, but for the remainder it consists of gray-brown cliffs of moderate height. A reef, with some above-water rocks, extends about 1 mile WSW of a bluff point, about 3.5 miles NNW of Mys Krasheninnikova. The reef terminates in two pillar rocks. The pillar rocks are conspicuous from N or S. Two conspicuous hummock hills, about 189m high with jagged summits, are located about 4 miles NNW of Mys Krasheninnikova. These hills slope steeply to the coast, but gently inland. Another hill, about 2.5 miles NNW of the cape, is also a prominent landmark.

Proliv Litke

2.24 Proliv Litke is the name that applies to the passage between Ostrov Karaginskiy and the mainland. The passage narrows about midway in to a width of 15 miles and has a least charted depth in the fairway of 31m.

Vessels using the N entrance, between Mys Il'pinskiy and the N extremity of Ostrov Karaginskiy, should steer to pass 3 to 5 miles S of Ostrov Verkhoturova, an island about 10 miles S of Mys Il'pinskiy.

Vessels using the S entrance, between Mys Krasheninnikova, the S extremity of Ostrov Karaginskiy, and Mys Ozernoy, about 43 miles S, should take all precautions to clear the dangers S and SE of Mys Krasheninnikova, and the dangerous rocky patch off Mys Ozernoy. A course to pass about one-third the width of the entrance from the S side is recommended.

2.25 North entrance to Proliv Litke.—Mys Il'pinskiy (59˚47'N., 164˚50'E.) is a small elevated plateau faced by steep cliffs. Near the point is Gora Il'pinskaya, having a conspicuous conical peak, 119m high. On the point is a fishing station. A small, low, sand, and shingle spit extends from the SW side of the point, and a reef, on which are some above-water rocks, extends about 0.5 mile S from the point, and then continues S as a submerged ledge.

Ostrov Okimkan, about 3 miles SSW of Mys Il'pinskiy, consists of two small gray rocks, 24m high, and a separate group of rocks above water. Kekur Neupokoyeva, consisting of two pillar rocks, one 15m high and the other about half that height, rises from a common base about 0.8 mile SE of Ostrov Okimkan. Dangerous reefs rising from considerable depths surround Ostrov Okimkan and Kekur Neupokoyeva and extend about 0.6 mile SE from the latter. During any swell, these reefs

are marked by heavy breakers. The passage between the rocks and Mys Il'pinskiy is encumbered with sunken rocks and kelp.

Ostrov Verkhoturova (59˚37'N., 164˚40'E.), about 10 miles SSW of Mys Il'pinskiy, has three separate peaks, the highest being 381m high and covered with grass. The shores of the island are steep and rocky, except for a sand and shingle beach on the N side. The S part of the island is formed by a low plateau, faced by steep cliffs forming two points. Pinnacle rocks lie as far as 0.3 mile off the S point, and three others lie close to the SE point.

A light is shown on the N coast of Ostrov Verkhoturova from a pyrimidal stone tower, painted black and white in stripes.

Ostrov Verkhoturova

Ostrov Verkhoturova Light

Somnitelnaya Banka (59˚22'N., 164˚40'E.), a rocky and dangerous patch lying about 12.5 miles S of Ostrov Verkhoturova, has a least depth of 0.2m, the position of which is doubtful.

2.26 Mys Golenishcheva (59˚14'N., 164˚36'E.), the N extremity of Ostrov Karaginskiy, is a rugged promontory faced with steep grayish-brown cliffs. The extremity of the cape is wedge-shaped, white in color, and very conspicuous against the brown color of the neighboring cliffs. This cape is remarkable, as no other headland in the N part of the island has this white extremity. The main range of Ostrov Karaginskiy extends in an unbroken mass SW from the cape, the N peak being 0.7 mile from the extremity of the cape. About 2.5 miles SSW of the cape is a conical mountain, 460m high, which is higher than the others in the vicinity and is conspicuous when seen from any direction.

Close to Mys Golenishcheva is a pyramidal rock, from which a reef extends NE. A shoal, with a depth of 1.6m, lies about 3.5 miles NE of the cape and is reportedly marked by breakers.

Recommended channels.—The recommended channel leads between Ostrov Verkhoturova and Somnitelnaya Banka. A vessel proceeding through this channel should steer to pass 3 to 5 miles S of Ostrov Verkhoturova in depths of more than 37m, over a bottom of pebbles and coarse sand.

In the channel between Ostrov Verkhoturova and Ostrov Okimkan and Kekur Neupokoyeva to the N, the depths are very irregular over a rocky bottom. In the approach from the E, the depths shoal rapidly. In this passage the depths are more than 16.5m.

The channel between Ostrov Okimkan and Kekur Neupokoyeva on the S and Mys Il'pinskiy on the N is encumbered with sunken rocks and kelp, through which is a narrow fairway with a least depth of 5.5m. This channel is very dangerous and should not be attempted.

The channel between Mys Golenishcheva and Somnitelnaya Banka has a depth of 12.2m. A 1.6m patch, marked by breakers, lies about 3.5 miles NE of Mys Golenishcheva.

2.27 West (mainland) side of Proliv Litke.—Zaliv Anapka is entered between **Mys Il'pinskiy** (59˚47'N., 164˚50'E.) and Mys Il'pyr, the SE extremity of Poluostrov Il'pyr, about 19 miles WNW. The E side of the bay is formed by low cliffs, inland from which the land rises to mountains. The S part of Poluostrov Il'pyr is high, its coast consisting of steep cliffs. It is connected to the mainland by a low sand and shingle isthmus. From the offing the peninsula appears as an island.

Zaliv Uala is entered between the SW extremity of Poluostrov Il'pyr and Mys Shilkan (Ostrov Shilka), about 11.5 miles W. Rocky patches, some of which dry, are located as far as 2 miles W of Poluostrov Il'pyr. Ostrov Shilka is a small islet connected at LW to the mainland W by a narrow strip of sand. The shore for about 4.5 miles NNE of Ostrov Shilka is cliffy, but then it slopes down to a low sand and shingle spit separating the shallow lagoon at the head of the bay from the sea. From the entrance to the lagoon, the N shore of the bay rises again and consists of sandy cliffs to Poluostrov Il'pyr.

2.28 Kichiginskiy Zaliv (59˚52'N., 163˚33'E.), entered between Mys Shilkan and the mouth of Reka Kichiga, about 9 miles WSW, is a shallow bay.

Reka Kichiga extends 0.8 mile N to Reka Belaya, forming a lagoon within the mouth which is separated from the sea by a sandy spit on each side of the entrance. The current flows out of the entrance at a velocity of 5 to 6 knots, being little affected by the flood tidal current. The entrance is very narrow and suitable only for boats with local knowledge.

Two prominent mountains, Gora Trekhvershinnaya, with three peaks, and Gora Naklonnaya, with steep sides, are located about 5 and 10 miles W, respectively, of the mouth of Reka Kichiga.

The coast for about 4 miles SSW of the mouth of Reka Kichiga is low, and then consists of low, sandy cliffs to **Mys Pakklan** (59˚38'N., 163˚25'E.).

Anchorage.—Anchorage can be taken in depths of 10 to 13m, mud and sand, about 1 mile off the low stretch of coast W of the mouth of Reka Kichiga. A vessel proceeding to this anchorage should approach it with Gora Trekhvershinnaya bearing 270˚. A rocky patch, with a depth of 1.8m, lies about 5 miles E of Mys Pakklan.

Zaliv Tuumlyat (59˚28'N., 163˚22'E.) is a bight entered between low and dark Mys Pakklan, and a point about 15 miles S. The shore SW of Mys Pakklan to Laguna Tymlat consists of sandy cliffs, then a narrow sand and shingle spit separates the lagoon from the sea. The S shore of the bight is formed by low cliffs. Close to the S shore of the bight are small hills, and farther inland are mountains covered with bushes and trees. Reka Tymlat, its entrance in the SW corner of Zaliv Tuumlyat, should be used only with local knowledge. A very small islet lies close offshore, about 2 miles SE of the mouth of Reka Tymlat.

Laguna Tymlat is entered about 1 mile N of the mouth of Reka Tymlat. The lagoon entrance is narrow and visible only when close to it. Local fishermen report depths of 1.8 to 2.1m in this channel, and the same or greater depths inside the lagoon.

Anchorage.—Anchorage can be obtained in 15m, shingle, with the mouth of Reka Tymlet bearing 247˚, distant 2.3 miles, and 1.2 miles off the spit. The spit is hard to make out at a distance greater than 2 to 2.5 miles, and the mouth of the river is hardly noticeable. The holding ground is poor, and it is not advisable to anchor in shallow depths or closer inshore.

Vessels should approach the above anchorage with **Gora Dvukhvershinnaya** (59˚34'N., 162˚59'E.), conical-shaped and twin peaked, bearing about 292˚. During any swell the whole area off the entrance to both the lagoon and the river is marked by breakers. The fishing stations are reported to be lighted at night.

2.29 Bukhta Ossora is entered between **Mys Ossorskaya** (59˚13'N., 163˚16'E.), the extremity of a low, sand and shingle spit, and Mys Lozhno-Kuzmishcheva, about 5 miles S. The bay affords anchorage in depths of 11 to 20m, sand and shingle, sheltered from winds from any direction. The S side of the bay is steep and fairly low, with some straggling hills and mountains covered with bush and trees inland. Primetnyy Kholm, 436m high and conspicuous, is located about 5 miles WNW of Mys Lozhno-Kuzmishcheva. The W shore of the bay is fringed by a low, sand, and shingle beach, and the hills recede inland and increase in height. From Reka Ossora to the sand and shingle spit, the shore is low and sandy for the first 0.5 mile, then rises in low cliffs. A fishery, the buildings of which are conspicuous from a distance of about 8 miles, is situated at the head of the bay.

A 4m depth lies about 1.5 miles SSE of Mys Ossorskaya. A 4.7m depth lies 1.7 miles ENE of Mys Lozhno-Kuzmishcheva. The inner side of the spit, and the N and S sides of the bay, have depths of 10m about 0.5 mile offshore. The bottom of the bay consists of coarse sand and shingle.

A stranded wreck, which is conspicuous throughout Bukhta Ossara, lies on the NW side of the spit, almost 1 mile N of the S extremity.

2.30 Ossora Port (59˚15'N., 163˚04'E.) is situated on the W shore of Bukhta Ossora. There are two piers at the settlement. One pier, 20m long and 15m wide, is used for cargo operations; it can only be approached at HW. The second pier, 28m long and 15m wide, has a depth of 1.5m alongside at LW. The pier is used for fish products.

Anchorage.—Sheltered anchorage can be obtained in Bukhta Ossora, on the NW side of Kosa Ossorskaya 0.5 mile offshore, in 12 to 13m. This anchorage is sheltered from the E and SE.

Another anchorage berth lying 0.5 mile offshore of the settlement, in depths of 12 to 15m course, sand and shingle bottom, is sheltered from the prevailing autumn NW and NE winds.

Bukhta Karaga

2.31 Bukhta Karaga is entered SW of **Mys Peschanaya Kosa** (59˚02'N., 163˚10'E.), the extremity of a low, sand and shingle spit, covered with vegetation, extending SSW and W from Mys Kuzmishcheva. The latter point is the SE extremity of the elevated peninsula separating Bukhta Karaga from Bukhta Ossora.

The coast between Mys Kuzmishcheva and Mys Lozhno-Kuzmishcheva, about 5 miles N, is cliffy. A sand and shingle spit, covered with vegetation, extends NNW from Mys Vkhodnoy, the S entrance point of the bay. The conspicuous hull of a vessel is situated on the N side of the entrance, on the S side of the N entrance spit.

The bay is surrounded by hills, with rounded summits, sloping gently to the shores, which are mostly marshy. Mys Starshiny is the extremity of a low sand and shingle spit, covered with juniper, extending NW and parallel to the NE shore of the bay. A fishing station is situated on this spit.

A bank, with depths of less than 5m, extends NNE from Mys Vkhodnoy. A depth of 1.9m lies at the outer end of the above bank, in the middle of the entrance to the bay. A depth of 5m lies about 1 mile SE of the above depth. There are depths of 11 to 12.8m about 0.3 mile off the N side of the extremity of the N spit to abreast its elbow.

Tides—Currents.—The MHW interval at Bukhta Karaga is 3 hours 49 minutes.

Anchorage.—Bukhta Karaga affords completely sheltered anchorage. The best anchorage is in depths 11 to 12.8m, mud, about 0.2 to 0.3 mile off the N side of the N spit. Another berth is in 10m, mud, about 0.5 mile offshore, abreast the fishery on the spit of which Mys Starshiny is the extremity.

Directions.—Vessels entering Bukhta Karaga should approach with the SW extremity of the N entrance spit bearing 337˚, and steer to pass this point at a distance of 0.2 to 0.3 mile off. There is a least depth of 7.3m on this course. The channel is only 0.15 mile wide at its narrowest point.

Bukhta Karaga to Ukinskaya Guba

2.32 The coast for 2.5 miles SW of **Mys Vkhodnoy** (58˚59'N., 163˚04'E.) consists of yellowish-brown sandstone cliffs, about 30 to 46m high, backed by hummocky hills, covered with bush and small trees. For the next 6 miles SW the coast is low and sandy.

Reka Makarova and Reka Kayum have a common entrance between two narrow sandy spits. The outflow of these two rivers causes discoloration for some distance from the common entrance.

A cliffy headland lies about 1.5 miles S of the above-mentioned entrance. A sandy bank, with several groups of

rocks, some above-water, extends over 0.8 mile E of the headland. The coast for 3 miles SW of the above bank is fringed by short reefs and drying rocks. A vessel, with a draft of 5m, reported touching bottom about 3 miles E of this cliffy headland. The coast from the headland to the mouth of Reka Dranka, about 6.5 miles SW, rises in low brown cliffs and is approached by straggling, hummocky hills.

Reka Dranka flows NE and parallel to the coast for its last 7 miles, and is separated from the sea on this reach by a sand and shingle spit. A building, about 7 miles W of the mouth of the river, is conspicuous from the offing.

Reka Pankara forms a large lagoon before it flows into the sea between two spits. The entrance (58˚35'N., 162˚21'E.) can be identified by the yellowish-brown cliffs, 30 to 46m high, extending 3 miles N from the entrance. The outgoing current in the entrance and in the channel inside attains a velocity of 3.5 to 4 knots.

The best anchorage off Reka Pankara is in a depth of 9m, about 0.6 mile offshore, midway between the entrance and the fishing station about 0.3 mile N. The bottom is shingle, poor holding ground.

The spit separating the lagoon of Reka Pankara from the sea is low and sandy. The coast S of this spit for 6.5 miles consists of light yellow sandy cliffs, 31 to 46m high in the center, and gradually becoming lower toward each end. A narrow sand and shingle spit separating the lagoon of Reka Rusakova from the sea extends from the cliffs to the mouth of Reka Rusakova, about 10.5 miles SSW. The entrance to the river lies between two narrow spits. Sandbanks, marked by breakers, extend seaward from the extremity of each spit.

Anchorage.—Anchorage can be obtained in depths of 9 to 10m, sand and shingle, about 0.8 mile offshore, abreast the fish cannery about 5 miles N of the mouth of Reka Rusakova.

From 0.5 mile S of the entrance to Reka Rusakova, a line of reddish-brown cliffs extends about 9 miles SSW, varying in elevation from 31 to 46m, being low toward either end. The cliffs, in some places, rise sheer from the coast, and in others are fronted by a narrow beach of sand, shingle, and gravel. About 7 miles SSW from the mouth of the river, these cliffs are interrupted by a small lake located close inland and not connected to the sea. The coast is low and sandy from the cliffs to the entrance of Reka Khalyulya, about 6 miles S.

Ukinskaya Guba

2.33 Ukinskaya Guba is a bay entered between Reka Khalyulya and **Mys Severo-Zapadnyy** (57˚56'N., 162˚33'E.). The depths decrease regularly to 6m, 0.5 mile off the W and S shores, except in the vicinity of the mouth of Reka Uka.

Two mountains, over 1,000m high, forming the E spurs of the range trending parallel to the coast some distance inland, are located about 10 miles W of the mouth of Reka Khalyulya. The S mountain has a pointed summit. The N mountain has a somewhat jagged crest extending in a NNE-SSW direction. These two mountains, which are joined by a spur, are conspicuous and are good marks for identifying the mouth of Reka Khalyulya.

The coast from Reka Khalyulya to the mouth of **Reka Uka** (57˚50'N., 162˚08'E.) is a uniform stretch of sand and shingle beach backed by very gently rising slopes, which are covered by grass near the coast and by bushes farther inland, and which extend a great distance inland to a mountain ridge. The bottom along this stretch is sandy. Reka Uka can be identified by the sandy cliff beginning about 2 miles E of it.

Uka, a village situated on the W bank of Reka Uka nearly abreast the entrance, is one of the largest settlements in this vicinity. The banks along the lower reaches of the river are low, sandy, and marshy.

Tides—Currents.—In the mouth of the river the velocity of the tidal currents attain a rate of as much as 4 knots.

Anchorage.—Anchorage can be obtained in depths of 8 to 9m, about 1 to 1.2 miles off the mouth of Reka Uka. It is not advisable to anchor closer, as depths of 6m extend about 1 mile seaward of the mouth of the river.

The coast for 2 miles ESE of Reka Uka is low and sandy, and then for the next 4 miles consists of a sandy cliff, about 46 to 61m high, fringed by a narrow beach of shingle and gravel. The last 5 miles to the mouth of Reka Malan-Vayam is low and sandy.

The E shore of Ukinskaya Guba is formed by the W side of Poluostrov Nachikinskiy. In the middle of this peninsula is Gora Nachikinskaya, an extinct volcano, which is easily distinguishable from the surrounding peaks by the dark color of its steep sides and by its jagged summit. This mountain is surrounded by numerous others, almost as high, most of which have pointed summits and inaccessible sides.

2.34 **Mys Severo-Zapadnyy** (57˚56'N., 162˚34'E.) is a rounded shingle point, inshore of which is a lagoon. The point is steep-to, with depths of less than 11m extending 1 mile NW. The coast SSW of the point is low and sandy, but small, rounded, rocky points extend offshore in places.

Ostrov Mandzhur (57˚50'N., 162˚27'E.), about 7 miles SSW of Mys Severo-Zapadnyy, is covered with grass and its middle part is covered with trees. On the middle of the islet is a sloping hill, 88m high. The coasts of the islet are almost everywhere bold. A beacon, consisting of a wooden pyramidal structure, about 6m high, its seaward side faced by white slats, stands near the edge of the cliff at the NW extremity of the islet. The beacon is clearly visible from seaward.

Anchorage.—The best anchorage off Ostrov Mandzhur is in a depth of 7m, sand and mud, 0.5 mile SW of the spit, located on the N part of the SW side of the island. A vessel should never attempt to anchor farther E as the depths decrease rapidly in that direction.

Ukinskaya Guba to Zaliv Ozernoy

2.35 **Mys Nachikinskiy** (57˚57'N., 162˚42'E.) is a cape formed by a small plateau descending from the mountains. It is edged with low cliffs, and its N point is small and sharp. A reef extends nearly 0.2 mile off the cape. It is steep-to off its extremity, with depths of 20 to 28m, sand, about 0.5 mile off the cape.

Mys Nizkiy (57˚49'N., 163˚12'E.), lying 18 miles ESE of Mys Nachikinskiy, is a low rounded point, fringed by a broad sand and shingle beach strewn with large rocks and backed by a moderately low brown cliff. A reef, extending about 2 miles

N of the cape, has a group of drying rocks near its extremity, which is steep-to. The cape should be given a berth of at least 3.5 miles.

Mys Ozernoy (57˚43'N., 163˚19'E.), the S entrance point of the S entrance to Proliv Litke, is a low, narrow point extending E and is distinguished by a small sand hill on its point. Another sand hill, about the same height, is located a little farther inland and is separated from the former sand hill by a gap. A detached range of mountains, with five conspicuous peaks of very peculiar columnar appearance, rises about 5 miles W of Mys Ozernoy and extends NNE toward Mys Nizkiy. A light is shown from Mys Ozernoy and a radiobeacon transmits from the light.

Mys Ozernoy should be given a wide berth, as a reef extends 1.5 miles off it.

Caution.—A sunken rock, the exact position of which is unknown, lies about 10 miles NE of Mys Ozernoy. When in this vicinity, vessels should proceed with caution.

Zaliv Ozernoy

2.36 Zaliv Ozernoy, between Mys Ozernoy and **Mys Stolbovoy** (56˚41'N., 163˚17'E.), 63 miles S, affords no protection from NE winds, but shelter can be obtained in its SW end during winds from between the S and E. Gora Dvoynaya, about 8 miles SSW of Mys Ozernoy, and the mountains in the vicinity of Mys Stolbovoy, form good marks and are visible in clear weather from any part of the bay.

Mys Dvoynoy, about 9 miles SSW of Mys Ozernoy, is the E of two small blunt points 1 mile apart. The yellow cliffs approach the cape somewhat closer than the W point. Reefs, extending about 1 mile SE of these points, consist mainly of submerged rocks marked by breakers. Gora Dvoynaya, about 2 miles N of the cape, is higher than the surrounding mountains and is very conspicuous, especially from the S or N, appearing as a twin-peaked mountain with steep, somewhat rounded slopes.

Mys Yuzhnyy, about 7 miles farther SSW, is a point formed by brown cliffs of moderate height. Seen in profile it appears as a level, raised plateau, rather low near the extremity of the cape. A large reef, consisting almost entirely of drying rocks, but with some sunken rocks near its extremity, extends 1.3 miles from the cape and the coast for some distance N.

2.37 The entrance to **Reka Ozernaya** (57˚21'N., 162˚47'E.), lying about 13 miles SW of Mys Yuzhnyy, forms a large lagoon enclosed by a low, sand and shingle spit, before flowing into Zaliv Ozernoy. The S and W shores of this lagoon are low and covered with grass and small bushes, but its N shore is formed by a cliff at the foot of some hills rising to a height of 101m. The mouth of the river is located between the N end of the spit and this cliff, and can be identified by the fact that the coast consists of light yellow sandy cliffs just N of it, and is low S of it. The mouth of the river is fronted by a bar, which can be distinguished by the sea breaking on it. The current of the river is strong, and at times attains a velocity of 4 knots.

The coast for about 5.5 miles S of Reka Ozernaya is flat and sandy, and then to **Mys Tupoy** (57˚01'N., 162˚51'E.), which consists of cliffs, 46 to 61m high, becoming gradually higher S. An off-lying danger, consisting of a sunken rock, position doubtful, was reported (1921) to be about 8 miles NE of Mys Tupoy. Near Mys Tupoy the cliffs along the coast are reddish-brown, but farther S they are somewhat lower and change to light yellow, sloping, sandy cliffs, about 46 to 61m high, which are very conspicuous from the offing. The SW corner of Zaliv Ozernoy consists of low, sandy beach.

2.38 **Reka Stolbovaya** (56˚42'N., 162˚56'E.) flows SE parallel to the coast, separated from the sea by a narrow spit, before turning NE to its mouth. The current in the river, before it enters the sea, attains a velocity of 6 to 7 knots.

Mys Pokatyy (56˚44'N., 163˚05'E.), lying about 5.5 miles NE of the mouth of the Reka Stolbovaya, slopes gently seaward, is faced with reddish-brown cliffs, and is covered with grass and bushes. The cape terminates in two small points, from each of which a reef extends about 0.5 mile from the point. The W reef is a drying ledge, and on the middle of the E reef is a small pillar rock.

Mys Sivuchiy, about 5 miles farther E, is the N extremity of a rugged peninsula formed by a detached mountain, 399m high, about 2.5 miles SW. The mountain slopes in wide terraces to the cape, which is faced by low cliffs. The cape is steep-to and is clear of dangers, the depths N of the cape being 37m about 0.3 mile off. Large numbers of seals breed on Mys Sivuchiy.

Ostrovok Stolbovoy, a basaltic islet about 1 mile SE of Mys Sivuchiy, is separated from the mainland by a narrow passage 0.15 to 0.2 mile in width. The E end of the islet appears as a massive crag about 150m high, and is separated from the rest of the islet by two clefts.

Mys Stolbovoy (56˚41'N., 163˚17'E.), lying about 3.5 miles SSE of Mys Sivuchiy, is a rugged high headland, the coast of which consists of grayish-brown cliffs 180 to 215m high. Mountains, about 455m high, rise from the coast in almost vertical slopes, which are bare except for small patches of scrub. A rock, 31m high, lies close to the cape. The coast in the vicinity of the cape is steep-to, with depths of 28 to 37m about 0.5 mile offshore. A shoal, with a depth of 11.2m, position doubtful, lies about 5 miles SE of Mys Stolbovoy and 3 miles offshore.

Kamchatskiy Poluostrov

2.39 Kamchatskiy Poluostrov separates Zaliv Ozernoy from Kamchatskiy Zaliv. The coasts of the peninsula are high, and are cliffy in the S and NE parts.

Ozero Nerpich'ye is a large lake connected to Reka Kamchatka by a narrow lagoon with depths of 3.4 to 5.5m. This lake is joined on its N side by Reka Tochkalnum to Ozero Stolbovoye, which is connected to Zaliv Ozernoy by Reka Stolbovaya. This system of lakes and rivers covers the whole of the isthmus joining the peninsula to the mainland.

A wide valley extends across the peninsula and terminates in a bay located about midway along the E coast of the peninsula. It divides the N and S groups of mountains on the peninsula, and is conspicuous from the offing.

A high sandstone bluff, showing bands of different colored strata, is located about 7 miles S of Mys Stolbovoy. In this vicinity the mountains, which occupy the NE part of

Kamchatskiy Poluostrov, approach the coast rising steeply to elevations of more than 610m.

Mys Afrika (56˚11'N., 163˚22'E.), lying 31 miles S of Mys Stolbovoy, is the E point of Kamchatskiy Poluostrov. The point is formed by a low sandy spit projecting into the sea in a SE direction. The spit has a broad base, but gradually tapers seaward. It is thickly covered with cedar groves. Groups of rocks are visible from a short distance offshore at many places on the spit, especially on its S side. Gora Afrika, rising to an elevation of about 900m, is located 4 miles WNW of the cape. A spur of this mountain parallels the coast about 3 miles inland and appears as a tableland. On the side of the cape this spur slopes steeply toward the base of the spit and terminates in a high precipice of sandstone. A light with a transmitting radiobeacon is exhibited from the cape.

Rocky reefs extend for about 0.5 mile offshore on all sides of the cape. A drying rock, marked by breakers, lies 1.8 miles SE of the extremity of the cape. An above-water rock lies about 0.8 mile W of this drying rock. About 1.5 miles E of Mys Afrika the depths range from 22 to 28m, shells and shingle, but N of this area the bottom changes to sand.

The coast from Mys Afrika to about 16 miles N is backed by the slopes of mountains extending parallel to the coast. The highest peak, about 6.5 miles NNW of Mys Afrika, is a reddish bare summit. Northward of this peak is a line of conical peaks, covered with bush and gradually becoming lower N.

Caution.—Along the section of the coast, between Mys Afrika and Mys Kamchatskiy, the 200m curve lies not farther than 5 miles offshore and the bottom shelves steeply toward the coast. When approaching this coast in thick weather, a vessel should proceed at a reduced speed, taking soundings continuously, and should not navigate in depths of less than 73m.

2.40 Mys Kamchatskiy (56˚00'N., 163˚03'E.), lying 15 miles SW of Mys Afrika, is the S extremity of Kamchatskiy Poluostrov. The point is formed by a low sand and shingle spit, which has a width of 0.5 mile and extends about 1 mile S from the foot of a mountain that rises to a height of 786m, 2.5 miles NW of the extremity of the cape. The spit is strewn with fragments of rocks. Close to the extremity of the cape there is a remarkable group of rocks, 12.2 to 15.2m high, which, when sighted from a distance, has the appearance of an old fortress. It is known locally as Kamen Gorod, meaning Rock City.

The outermost of the dangers fringing the cape is a submerged rock located 2.5 miles SW of the extremity of the cape. This rock is clearly marked by breakers in the usual swell, but has only blind rollers when the swell is slight. An above-water pinnacle rock lies about 2.5 miles W of the extremity of the cape.

Within an area extending about 5 miles S from the S coast of Poluostrov Kamchatskiy, the depths are extremely uneven, and there is much kelp, easily identified by its greenish-brown color. A vessel should give this coast a berth of at least 5 miles, keeping in depths of more than 45m.

2.41 Sopka Shivelyuch (56˚40'N., 161˚30'E.), an extinct volcano, about 70 miles NW of Mys Kamchatskiy, is the highest peak of an isolated mountain group. Due to its great elevation it is visible from all parts of Zaliv Ozernoy, from the E side of Poluostrov Kamchatskiy, and from the N half of Kamchatskiy Zaliv. From seaward it appears as a small, snow-capped peak.

Komandorskiye Ostrova (Komandorski Islands)

2.42 Komandorskiye Ostrova, consisting of Ostrov Beringa (Bering Island) and Ostrov Mednyy (Copper Island), are located about 100 miles ESE of Mys Afrika, and 190 miles from Attu, the nearest of the Aleutian Islands. The islands belong to Russia, the governor normally residing at Nikol'skoye, a settlement on the W side of Ostrov Beringa.

The islands are of volcanic origin, consisting of basalt and syenite rocks, and were caused by the same forces that produced the Aleutian chain. There are no active volcanoes on the islands, but the activity of the Aleutian volcanoes are felt on the islands.

Komandorskiye Ostrova are very high, being visible in clear weather from 40 to 50 miles. In general, the depths a few miles off the islands are considerable.

The islands have long been famous for the fur trade. Seal breeding grounds, which are government game preserves, are situated on both islands.

Caution.—The islands are covered in fog for a large part of the navigation season. When anchoring, vessels should take into account the fact that earthquakes, which occur frequently at Komandorskiye Ostrova, are sometimes accompanied by seismic waves. Vessels navigating in the vicinity of Komandorskiye Ostrova should always keep clear of kelp. None of the bays afford completely sheltered anchorage, and frequently the wind shifts suddenly. During storms or fresh winds, vessels at anchor in any of the bays are advised to proceed to sea.

In order not to frighten any of the seals on Komandorskiye Ostrova, vessels passing these islands should not navigate too close to the shores, should not shoot any guns when in this vicinity, and should not shine their searchlights on the shores.

Ostrov Beringa

2.43 Ostrov Beringa (55˚00'N., 166˚15'E.) is mountainous in its central and SE parts. The NW part of the island is of a different character. The hills are flatter and form a series of plateaus sloping down to the coast in terraces.

Gora Shtellera (54˚53'N., 166˚24'E.), the highest mountain in the island, is located about 15 miles NW of the SE extremity of the island, and has a crater-shaped summit. Northward of this mountain is the conspicuous valley known as Dolina Polovinnaya, which appears to divide the island in two and is especially remarkable from the NE.

Stolovye Kholmyy, two very peculiar flat-topped hills, are located about 9 miles E of Mys Severozapadnyy, the NW extremity of the island. The N hill is 143m high, and the S hill is 137m high. The highest hill in the N part of the island is 188m high, about 2.5 miles E of Stolovye Kholmyy.

The surface of the island, except in its high S part, consists of tundra. In places are large tracts of meadow land covered with coarse grass.

Dangerous and unsurveyed reefs with detached rocks fringe the island.

Coast between Mys Kamchatskiy and Mys Afrika from SSW

2.44 North coast of Ostrov Beringa.—The N coast of Ostrov Beringa is very uniform and moderately high. From the E, the formation of the tableland on the N side of the island gives the appearance of a whole series of fortifications. Reefs, on which are some above-water rocks, extend as far as 2 miles offshore.

Mys Severovostochny (55˚18'N., 166˚17'E.), the NE extremity of the island, is a low, narrow headland. Mys Tonki, a slender point, lies about 2.7 miles NW. The entire shore of Bukhta Sarannaya, the bight between Mys Tonki and Mys Yushina, 11 miles W, is fringed by sunken rocks and should be approached with great caution.

Mys Yushina (55˚22'N., 165˚57'E.), the N extremity of the island, is a low point from which a reef is reported to extend 2 miles in a N direction. Sivuchy Kamen' (Ostrov Sivuchiy) (Sea Lion), 3 to 4.6m high, of remarkable shape, lies on this reef, close NNW of the point. This rock is connected to the point by a row of low rocks. At a distance, these rocks are not visible and Sivuchy Kamen' appears detached.

A patch of kelp lies 0.8 mile W of Sivuchy Kamen'.

Anchorage.—Anchorage with shelter from S winds can be obtained between Sivuchy Kamen' and a reef marked by kelp 0.5 mile E. The best berths are in a depth of 18m, sand and shells, with Mys Severozapadny bearing 241˚, a prominent red storehouse (the only building of its kind in the vicinity) bearing 192˚, and Mys Tonki bearing 104˚. Anchorage may also be taken in depths of 14.6 to 16.5m, with Sivuchy Kamen' bearing 250˚, and the red storehouse bearing 202˚.

Caution.—Vessels are prohibited from passing any closer than 2 miles from Mys Yushina.

Mys Severozapadny (55˚17'N., 165˚44'E.), 8 miles WSW of Mys Yushina, is hilly and is the NW extremity of the island. A white pyramid beacon, 5m high, stands at an elevation of 26m on the point. The point is fringed to a considerable distance by a reef, and some drying rocks, not always marked by breakers, lie off this reef about 1.5 miles W to WSW of the point.

A shoal, with a depth of 29m, was reported (1946) to lie about 18 miles NW of Mys Severozapadny. Depths of 29m (position approximate), 12.8m (reported in 1964), and 40m lie 23 miles NW, 30 miles NW, and 11.5 miles SW, respectively, of Mys Severozapadny.

2.45 Southwest coast of Ostrov Beringa.—Mys Zabiyaka (55˚15'N., 165˚53'E.) is a 55m high headland. It is darker and higher than the coast in the vicinity. It appears as a small island when viewed from the S. A shoal, with a least depth of 2.5m, lies with its N end 1 mile WSW of the point and extends as a narrow ridge 0.8 mile S. There are depths of over 18.3m around it.

Kamen Ari, about 4 miles SW of Mys Zabiyaka, consists of two rocks, the N being pointed and about 46m high, and the S being perfectly flat and about 2.1m high.

Ostrov Toporkov, about 5 miles E of Kamen Ari, is a flat islet, difficult to distinguish from seaward as it blends with the higher land of the coast. A drying reef extends as far as 0.1 mile from the islet. The S and SW sides of this reef are steep-to. The best landing place is at the N end of the island. Puffins breed on the island in great numbers.

Kamen' Polovinchatyy, about 1.5 miles W of the N end of Ostrov Toporkov, is a rock, awash, and marked by breakers in ordinary weather. A 6.4m patch lies about 0.2 mile N of the rock.

Mys Vkhodnoi Rif (55˚11'N., 165˚58'E.), a peninsula 18m high near its extremity, is fringed with rocks extending 0.3 mile offshore on its W and SW sides. Foul ground extends as far as 0.7 mile W to SW from the peninsula. Banka Yakut, a shoal with a least depth of 5.5m, lies 0.6 mile N of the extremity of the peninsula. In the channel between Mys Vkhodnoi Rif and Ostrov Toporkov the depths are uneven, varying between 12.8 and 29m in the middle of the channel.

Nikol'skiy Reyd is entered N of Mys Vkhodnoi Rif. In the approach from the S or SW, the flat-topped Stolovye Kholmyy are conspicuous, and often are visible above the low fog. In case Stolovye Kholmyy cannot be seen in thick weather, it is advisable first to pick up Sivuchy Kamen' and then proceed in. The passage leading N of Sivuchy Kamen' and Ostrov Toporkov is not recommended. Vessels should pass about 0.3 mile S of Ostrov Toporkov, then alter course NE to the anchorage.

Ice.—In some years slush and young ice occur from November to February. Occasionally there are large quantities of drift ice from the E coast of Kamchatka after W and NW winds.

Tides—Currents.—Tides at Nikol'skiy Reyd are of the mixed type, diurnal tides predominating. The tidal range varies between 0.3 and 1.3m.

Anchorage.—A large vessel should anchor in 20.1m, sand, on the line joining the N extremity of Ostrov Toporkov and the radio towers at Nikol'skoye, and with the extremity of Mys Vkhodnoi Rif bearing 145˚.

Winds from the SW through WNW send a heavy swell into the anchorage. There is a ground swell, even in ordinary weather. The anchorage, due to the poor holding ground, is dangerous, especially in autumn, when W winds are more frequent than in summer, and are fresh and prone to producing squalls for long periods. This anchorage is the best in the

island. Vessels should be ready to put to sea on short notice, since, sudden shifts of wind are frequent, especially in autumn. Southeast winds veer to the S and SW, and NE winds back to the N and NW. Several sealing vessels have been driven ashore.

2.46 Nikol'skoye (55˚12'N., 165˚59'E.) (World Port Index No. 62630), on the SE side of the roadstead, is the residence of the governor of Komandorskiye Ostrova, and the administrative center of the islands.

The coast from Nikol'skiy Reyd to the SE extremity of Ostrov Beringa is cliffy and high. It is steep-to except for some reefs extending offshore at Mys Poludennyy, Mys Kazarmennyy, and Mys Shepitanski.

Mys Orekhovski (55˚03'N., 166˚04'E.) appears from the N as a labyrinth of small caves and grottoes.

Bukhta Gladovskaya (54˚55'N., 166˚16'E.), a small bay lying 12.5 miles SSE of Mys Orekhovski, has a depth of 46m, sand and shells. Mys Ostrovnoy, about 6 miles farther SE, from a distance appears as two flat islets which merge into one as the point is approached, and are connected to the coast by a low isthmus. A drying rock lies 1 mile S of the point.

Mys Monati (54˚42'N., 166˚40'E.), the SE extremity of the island, is high and cliffy, but terminates in a gentle slope. In clear weather, the cape may be seen for 30 miles. A prominent rock, shaped like a tower, is located NW of the cape. The cape is fringed by a reef and shoal water extends about 1 mile W and 3 miles SE from it. In good weather, all the rocks on this reef can be seen. It is nearly always marked by breakers.

2.47 Northwest coast of Ostrov Beringa.—An almost continuous reef, extending 0.7 to 2 miles offshore, stretches along this coast. Vessels should keep at least 3 miles off the coast.

Mys Nepropusk (54˚45'N., 166˚42'E.), 3.5 miles N of Mys Monati, is a conspicuous cliff. The coast for about 10 miles N of Mys Monati consists of steep cliffs.

Mys Komandor (54˚57'N., 166˚31'E.), about 12.5 miles N of Mys Nepropusk, is formed by a solitary hill rising straight from the coast.

Bukhta Polovina (54˚57'N., 166˚29'E.), in which there is a shelving beach, is entered W of Mys Komandor. A small stream flows into the head of the bay.

Mys Buyan, 10 miles NNW of Bukhta Polovina, is prominent. A 15m shoal, position approximate, lies 19.5 miles E of Mys Buyan.

2.48 Staraya Gavan' (55˚12'N., 166˚14'E.), a break in the coastal reef lying about 10 miles NNW of Mys Buyan, extends W to the shore of a bight and has a width of 0.25 mile. The reef on the N side consists of a mass of rocks, partly submerged and partly above-water and marked by breakers. For a distance exceeding 1 mile N of this harbor, reefs extend from the shore and break up the sea and swell during N winds. Local reports state that even during strong NE winds the force of the sea is spent on the outer rocks, and the water in the channel and harbor is comparatively smooth. The reef on the S side of the harbor is a continuous group of rocks, 0.5 to 1m high. Several submerged rocks extend farther E from this reef and are marked by breakers.

The depths in the approach to the harbor decrease regularly. At a distance of 3 miles offshore the depths are 46m, shells. The depths in mid-channel decrease from 14.6 to 9.1m, the bottom in the N part being rocky, and in the S part being sandy.

The harbor is exposed to all E winds and has not been well surveyed.

Anchorage.—Anchorage for large vessels can be taken in 28m, rock and sand, on the line joining the outer breakers on either side. Only small vessels with local knowledge can enter the harbor and obtain anchorage in depths of 3.7 to 9m, sand.

Approaching from the N, vessels will notice two gaps in the mountains S of Mys Severovostochnyy. Through the first gap is seen Stolovye Kholmyy. The second gap indicates Staraya Gavan', which should be approached on a W course, continuously sounding. Entering the harbor presents no particular difficulties, the entrance being defined by the breakers on either side.

Ostrov Mednyy

2.49 Ostrov Mendyy consists of a narrow mountainous ridge rising steeply from the sea. Short spurs extend from the ridge and terminate in bluff headlands.

Gora Gavanskaya (54˚49'N., 167˚30'E.), on the E side of Gavan Preobrazhenskaya, is a conical mountain covered with snow throughout the year. It rises to a height of 587m, is the highest point of the island, and forms an excellent landmark.

Rocks lie close offshore all around Ostrov Mendyy. There are no good anchorages. In almost all the bays, temporary anchorage can be taken in depths of 46 to 55m.

Mys Sulkovskogo (54˚52'N., 167˚22'E.), the NW extremity of the island, is a rocky point from which a reef extends nearly 3 miles NW. The point should be given a wide berth. On the middle of the reef are Bobrovye Kamni (Sea Otter Rocks), two large jagged conspicuous rocks, so named because of their shape.

Kitolovnaya Banka (54˚59'N., 167˚07'E.), with a least depth of 3m, is located 11 miles NW of Mys Sulkovskogo. Some reports state it lies 1 mile NW, and other more recent reports state that it lies 1 mile SW of its charted position. The shoal is marked by breakers during heavy seas or swell. Tide rips have been observed in the passage between the shoal and Ostrov Mendyy. These were more noticeable some distance W of the charted position of the shoal. A depth of 15m lies approximately 10 miles NW of Kitolovnaya Banka.

2.50 Northeast coast of Ostrov Mednyy.—Between **Mys Peschanyy** (54˚50'N., 167˚28'E.), a high conspicuous point about 4 miles SE of Mys Sulkovskogo, and Mys Sivuchiy Kamen, about 3 miles further SE, the coast recedes about 1.5 miles to form a bay. Two detached above-water rocks lie off Mys Peschanyy. Sivuchiy Kamen is two above-water rocks lying off Mys Sivuchiy Kamen.

Bukhta Peschanaya, in the NW part of the aforementioned bay, extends 0.8 mile W from its entrance and has a width of about 0.5 mile. The depths decrease gradually from 29m in the entrance to 11m about 0.2 mile from the head, then decrease rapidly. The bottom is sand.

Anchorage.—Anchorage is recommended for small vessels at the head of Bukhta Peschanaya. Although a continuous swell enters the anchorage even during N winds, from which it is protected by a high hill, this anchorage is preferable to that which lies off Gavan' Preobrazhenskaya.

Gavan' Preobrazhenskaya, a small cove, lies W of Gora Gavanskaya. A number of rocks and a pillar rock extend about 0.2 mile NE of the W entrance point, slightly protecting the harbor from N. Preobrazhenskaya, at the head of the harbor, is the only permanent settlement on the island.

Anchorage.—Anchorage for small craft is available in 5.5m, abreast Skala, a remarkable above-water rock which lies off the W entrance point. There is no swinging room, and a vessel must moor with hawsers laid out to the shore. During N winds, a good scope of chain is required, as the rocks off the entrance do not completely protect the harbor.

Anchorage for large vessels can be obtained in 35m, gray sand, abreast a cleft in a vertical cliff, with Mys Peschanyy bearing 336˚, Mys Sivuchiy Kamen bearing 112˚, and the detached pillar rock off the entrance to Gavan' Preobrazhenskaya bearing 176˚ and in line with a church in the village. The holding ground is poor and the anchorage is insecure with N winds.

Bukhta Korabelnaya, a bight entered N of **Mys Korabelny** (54˚42'N., 167˚44'E.), affords anchorage during W winds. Mys Korabelny terminates in a nearly vertical cliff, 15 to 24m high, from which a reef extends 0.5 mile NNE. A settlement comprising several huts is situated between sand dunes at the head of the bight.

Anchorage.—Anchorage can be taken, except during onshore winds, in a depth of 22m, coarse sand, with Mys Korabelny bearing 100˚, and the middle of the settlement bearing 185˚. Landing is very difficult on account of the almost incessant swell and a shoal which extends some distance offshore from the settlement.

2.51 Mys Cherny (Black Point) (54˚41'N., 167˚50'E.), the most salient point on the NE side of Ostrov Mendyy, lies about 4.5 miles SE of Mys Korabelny and is composed of dark-colored bluffs and is very high.

Bukhta Glinka, 4 miles SSE of Mys Cherny, has a summer settlement situated on the hillside at its head, and a wooden house, painted red, is situated directly below the settlement. Nearly behind the settlement is a large, light-colored watercourse. Reefs extend from both entrance points.

In the entrance to Bukhta Glinka are depths of 37 to 55m, shoaling to 22m close inside the entrance.

Anchorage.—Anchorage can be taken at the entrance, with the settlement bearing 230˚, Mys Cherny bearing 327˚, and Mys Glinka, the S entrance point, in line with Mys Yugovostochny. During W winds, moderate gusts come down the hills, but there is neither sea nor swell at the anchorage. During E winds, anchorage is impossible and landing difficult.

The SE end of the island is formed by a large isolated hill with steep cliffs on all sides, joined to the main part of the island by a narrow isthmus. A dangerous reef extends about 3 miles SE from the SE end of the island, between Mys Yugovostochny and Mys Yuzhny, about 2 miles SSW. Several conical detached rocks lie near the coast on this reef.

2.52 Southwest coastof Ostrov Mednyy.—The SW coast of the island is especially steep-to. The NW half of this coast is very steep-to and may be approached closely with safety. The coast is fringed by pillar rocks, some of which are prominent from offshore.

Mys Palata (54˚34'N., 167˚50'E.), about 152m high, fringed with reefs and rocks, is the most prominent headland on this part of the coast, lying 6 miles WNW of Mys Yuzhny. It is perpendicular on its S side and is said to resemble a large house with a steep peaked roof.

Anchorage.—Anchorage can be obtained in a depth of 22m, rock, about 0.7 mile offshore, off the seal rookeries S of Mys Palata.

Mys Vodopadski (54˚39'N., 167˚40'E.) lies 7 miles NW of Mys Palata and derives its name from a waterfall nearby. Korabelnyy Stolb, about 2 miles NW, is a very conspicuous pillar rock, 31m high, joined to the mainland and lying among a group of rocks off a conspicuous bluff headland. Korabelnoye Lezhbishche is a rookery along this stretch of coast, which consists of nearly perpendicular bluffs, between the projections of which are small coves affording shelter to the seals when breeding.

Sivuchiy Kamen' (Sea Lion Rock) (54˚50'N., 167˚22'E.), about 15 miles NW of Mys Vodopadski and 1 mile S of Mys Sulkovskogo, the NW extremity of the island, is a very conspicuous pillar rock.

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